

ABSTRACT OF THE DISCLOSURE

A tuning circuit using a negative resistance circuit for compensating an equivalent series resistance component thereof is provided. The negative resistance circuit has simple circuit construction and design and adjustment thereof is easy.

The tuning circuit comprises a series resonance circuit and a negative resistance circuit connected to the series resonance circuit in series. In the negative resistance circuit, a first transistor constitutes an inverse amplifier by providing a resistor in an emitter circuit thereof and a second transistor constitutes an emitter follower circuit. A positive feedback circuit is constituted by feeding back an output of the emitter follower circuit to an emitter circuit of the first transistor and a negative feedback circuit is constituted by feeding back an output terminal to a base circuit of the first transistor. Thus a negative resistance is produced between this base input terminal and an earth. In this case, since a desired negative resistance value is obtained by adjusting a feedback quantity of both the feedback circuits, Q of the tuning circuit can be set to a desired value.